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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,719	12/05/2005	Dirk Leinweber	2003DE428	3847

25255 7590 06/05/2009  
CLARIANT CORPORATION  
INTELLECTUAL PROPERTY DEPARTMENT  
4000 MONROE ROAD  
CHARLOTTE, NC 28205

EXAMINER
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WANG, CHUN CHENG

ART UNIT	PAPER NUMBER
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1796

MAIL DATE	DELIVERY MODE
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06/05/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/559,719	<b>Applicant(s)</b> LEINWEBER ET AL.	
	<b>Examiner</b> Chun-Cheng Wang	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03/23/2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This office action is in response to the Amendment filed on 03/23/2009. Claims 1-8 are now pending.
2. The objections and rejections not addressed below are deemed withdrawn.
3. The text of those sections of Title 35, U.S. Code not included in this section can be found in a prior Office Action.

### ***Claim Rejections - 35 USC § 103***

4. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berkhof et al. (US 5164116 A) in view of Knischka et al. ("Functional Poly(ethylene oxide) Multiarm Star Polymers: Core-First Synthesis Using Hyperbranched Polyglycerol Initiators", *Macromolecules*, 2000, 33 (2), pp 315–320, December 29, 1999).

The rejections stand as per the reasons set forth in the previous Office Action, incorporated herein by reference.

### ***Response to Arguments***

5. Applicant's arguments filed 03/23/2009 have been fully considered but they are not persuasive.
6. Applicants alleged: "the person skilled in the art would not have seen any incentive to move from the subject matter disclosed in Berkhof et al., formula III by replacing the C1- to C4-polyol with the polyfunctional initiator disclosed in Knischka, et al., in order to obtain a totally different structure, which is not the same structure as instantly claimed".

Response: Berkhof et al. teach use of crosslinked additive of formula  
 $[\text{HO}-(\text{C}_2\text{H}_4\text{O})_d(\text{C}_3\text{H}_6\text{O})_e]_k-\text{R}'-[(\text{C}_3\text{H}_6\text{O})_f(\text{C}_2\text{H}_4\text{O})_g\text{H}]_l$ , in which R' is a C<sub>1-4</sub> alkyl polyol, e.g.

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glycerol, as demulsifier (column 4, lines 55-68). Knischka et al. teach controlled synthesis of hyperbranched polyglycerol to overcome the solubility limitations of the highly polar hyperbranched polyglycerol by the attachment of several propylene oxide units to the polyglycerol end groups, permitting control of the polarity of the hyperbranched structure without variation of the overall functionality (page 315, last paragraph to page 316, first paragraph). In addition, end-functional multiarm star polymers possess unusually high functionality that permits further cross-linking (page 315, 1<sup>st</sup> paragraph, last 3 lines). The flexibility of controlling the polarity of the hyperbranched polyglycerol would make it suitable for demulsifying different petroleum of different composition, i.e. polarity. It would be obvious to crosslink the alkoxyated hyperbranched polyglycerol and add it in as one of the additives such that it will reasonably produce the expected demulsifying result.

7. Applicants alleged: "The Applicants ... can not agree ... that Knischka et al., discloses a polyglycerol according to instant claim 1. Knischka, et al., discloses a structurally close but different compound".

Response: As applicants indicated Knischka et al. molecules form glycerol units bonded to starting molecule, i.e. polyglycerol formed before alkoxylation as illustrated in a) (page 316, top left). The polyglycerol meet the limitation "polyglycerol" of Claim 1.

### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chun-Cheng Wang whose telephone number is (571)270-5459. The examiner can normally be reached on Monday to Friday w/alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ling-Siu Choi/  
Primary Examiner, Art Unit 1796

Chun-Cheng Wang  
Examiner, Art Unit 1796

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/CCW/